Johns Creek
*be the exception*

# INVITATION TO BID

## FOR THE CONSTRUCTION OF

## NEWTOWN PARK LAKE DREDGING PROJECT

**BID NUMBER**

**16-243**

**Release of Bid:**
**August 4, 2016**

**Pre-bid Conference**
**August 17, 2016 @ 1:30PM**

**Deadline for Questions**
**August 18, 2016 @ 5:00 PM**

**Bid Due Date**
**August 31, 2016 @ 2:00 PM**

**Questions must be directed to:**
**City of Johns Creek, Purchasing Manager, John T. Henderson,**
**via e-mail to:**
*john.henderson@johnscreekga.gov*

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# CITY OF JOHNS CREEK

## ANNOUNCEMENT

## ITB #16-243

## NEWTOWN PARK LAKE DREDGING PROJECT

The City of Johns Creek is accepting informal Invitations to Bid (ITB) from qualified construction firms for the Newtown Park Lake Dredging Project. ITB's will be received no later than **2:00PM. on August 31, 2016** in the City of Johns Creek Purchasing Office, 12000 Findley Rd., Suite-400, Johns Creek, Georgia, 30097. ITB's received after the above time or in any other location other than the Purchasing Office **will not** be accepted. A ***mandatory*** Pre-Bid Conference will be held on **August 17, 2016 at 1:30 PM** at the Newtown Park location at 3150 Old Alabama Rd., Johns Creek, GA 30097.

The City of Johns Creek, in accordance with Title VI of the Civil Rights Act of 1964 and 78 Stat. 252, 42 USC 2000d—42 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, part 21, Nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award.

ITB packages are available on the City of Johns Creek website (*www.johnscreekga.gov*) . Additional information may be obtained by contacting the Purchasing Office at (678) 512-3233. **ITB's can be submitted by fax or email since it is non-formal.** All offerors must comply with all general and special requirements of the ITB information and instructions enclosed herein.

The City of Johns Creek reserves the right to reject any or all bids and to waive technicalities and informalities, and to make award in the best interest of the City of Johns Creek.

## BID FORM

**TO: PURCHASING MANAGER**
**CITY OF JOHNS CREEK**
**JOHNS CREEK, GEORGIA 30097**

**Ladies and Gentlemen:**

In compliance with your Invitation To Bid, the undersigned, hereinafter termed the Bidder, proposes to enter into a Contract with the City of Johns Creek, Georgia, to provide the necessary machinery, tools, apparatus, other means of construction, and all materials and labor specified in the Contract Documents or as necessary to complete the Work in the manner therein specified within the time specified, as therein set forth, for:

## NEWTOWN PARK LAKE DREDGING PROJECT

The Bidder has carefully examined and fully understands the Contract, Specifications, and other documents hereto attached, has made a personal examination of the Site of the proposed Work, has satisfied himself as to the actual conditions and requirements of the Work, and hereby proposes and agrees that if his bid is accepted, he will contract with the City of Johns Creek in full conformance with the Contract Documents.

Unless otherwise directed, all work performed shall be in accordance with the Georgia Department of Transportation *Standard Specifications, Construction of Transportation Systems* (current edition). All materials used in the process of completion of the work included in the Contract will be furnished from Georgia Department of Transportation certified suppliers only.

It is the intent of this Bid to include all items of construction and all Work called for in the Specifications, or otherwise a part of the Contract Documents.

In accordance with the foregoing, the undersigned proposes to furnish and construct the items listed in the attached Bid schedule for the unit prices stated.

The Bidder agrees that the cost of any work performed, materials furnished, services provided or expenses incurred, which are not specifically delineated in the Contract Documents but which are incidental to the scope, intent, and completion of the Contract, shall be deemed to have been included in the prices bid for the various items scheduled.

Bidder acknowledges receipt of the following addenda:

| Addendum No. | Date Received |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Bidder further declares that the full name and resident address of Bidder's Principal is as follows:

Signed, sealed, and dated this _____ day of _____

Bidder _____ (Seal)
Company Name

Bidder Mailing Address:

_____
_____
_____
_____
_____

By: _____

Title: _____

By: _____

Title: _____

## BIDDING INSTRUCTIONS

FAILURE TO RETURN THE FOLLOWING BID DOCUMENTS WILL RESULT IN THE BID BEING DEEMED NON-RESPONSIVE AND AUTOMATIC REJECTION:

1. City Bid Schedule,
2. Applicable Compliance Specifications Sheets, and
3. Applicable Addenda Acknowledgement, Page 6.
4. Bid Bond

BIDDING REQUIREMENTS

GDOT Specification – Section 102-Bidding Requirements and Conditions will be followed for this bid package.

Interested parties shall submit their completed bid by the date and time designated on the cover sheet to the City of Johns Creek Purchasing Office. Any bids received after the deadline will be returned to the bidder. It is understood and agreed that this bid shall be valid and held open for a period of thirty (30) days from bid opening date.

The following items will be included in the bid response package.

1. Completed BID TAB Sheet
2. Certificate of Insurance
3. E-verify/SAVE Affidavit
4. The bidder shall provide project references to verify experience completing projects of similar scope.

Omission of any of the above items may disqualify the bidder from competition.

BID SCHEDULE:

| | |
|---|---|
| Release of Bid | 8/04/16 |
| Pre-bid Conference | 8/17/16 @ 1:30 PM (Mandatory) |
| Deadline for Questions | 8/19/16 @ 5:00 PM |
| Response to Questions | 8/22/16 |
| **Bid Due Date:** | **8/31/16 @ 2:00 PM** |
| Anticipated Notice to Proceed | |
| Project Completion Date | 90 calendar days |

## INSURANCE REQUIREMENTS

Within 10 days of Notice of Award, and at all times that this Contract is in force, the Contractor shall obtain, maintain and furnish the City Certificates of Insurance from licensed companies doing business in the State of Georgia with an A.M. Best Rating A-6 or higher and acceptable to the City covering:

1. Statutory Workers' Compensation Insurance
   (a) Employers Liability:
   Bodily Injury by Accident - $100,000 each accident
   Bodily Injury by Disease - $500,000 policy limit
   Bodily Injury by Disease - $100,000 each employee
2. Comprehensive General Liability Insurance
   (a) $1,000,000 limit of liability per occurrence for bodily injury and property damage Owner's and Contractor's Protective
   (b) Blanket Contractual Liability
   (c)I Blanket "X", "C", and "U"
   (d) Products/Completed Operations Insurance
   (e) Broad Form Property Damage
   (f) Personal Injury Coverage
3. Automobile Liability
   (a) $1,000,000 limit of liability
   (b) Comprehensive form covering all owned, non-owned and hired vehicles
4. Umbrella Liability Insurance
   (a) $1,000,000 limit of liability
   (b) Coverage at least as broad as primary coverage as outlined under Items 1, 2, and 3 above

5. The City of Johns Creek, Georgia, and its subcontractors and affiliated companies, their officers, directors, employees shall be named on the Certificates of Insurance as additional insured and endorsed onto the policies for Comprehensive General Liability, Automobile Liability and Umbrella Liability insurance maintained pursuant to this Contract in connection with liability of the City of Johns Creek and their affiliated companies and their officers, directors and employees arising out of Contractor's operations. Copies of the endorsements shall be furnished to the City prior to execution of the contract. Such insurance is primary insurance and shall contain a Severability of Interest clause as respects each insured. Such policies shall be non-cancelable except on thirty (30) days written notice to the City. Any separate insurance maintained in force by the additional insured named above shall not contribute to the insurance extended by Contractor's insurer(s) under this additional insured provision.

Certificate Holder should read: The City of Johns Creek, Georgia, 12000 Findley Rd, Suite 400, Johns Creek, Georgia 30097.

## QUALIFICATIONS SIGNATURE AND CERTIFICATION
**(Bidder to sign and return)**

I certify that this offer is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a proposal for the same materials, supplies, equipment, or services and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of State and Federal Law and can result in fines, prison sentences, and civil damage awards. I agree to abide by all conditions of the proposal and certify that I am authorized to sign this proposal for the proposer. I further certify that the provisions of the Official Code of Georgia Annotated, Sections 45-10-20 et. Seq. have not been violated and will not be violated in any respect.

Authorized Signature_____Date_____

Print/Type Name_____

Print/Type Company Name Here_____

CORPORATE CERTIFICATE

I, _____, certify that I am the Secretary of the Corporation named as Contractor in the foregoing bid; that _____ who signed said bid in behalf of the Contractor, was then (title)_____ of said Corporation; that said bid was duly signed for and in behalf of said Corporation by authority of its Board of Directors, and is within the scope of its corporate powers; that said Corporation is organized under the laws of the State of _____.

This _____ day of _____, 20_____

_____(Seal)
(Signature)

LIST OF SUBCONTRACTORS

I do _____, do not _____, propose to subcontract some of the work on this project. I propose to Subcontract work to the following subcontractors:

Company Name: _____

**The City of Johns Creek requires minimum of 51% participation by the prime Contractor on all projects.**

# EXHIBIT A
# BID SPECIFICATIONS

# BID FORM

# AND

# TECHNICAL SPECIFICATIONS

## FOR

# NEWTOWN PARK
# LAKE DREDGING

## CITY OF JOHNS CREEK
## FULTON COUNTY, GEORGIA

**Development Planning & Engineering, Inc.**
770.271.2868 (office) • 770.271.0779 (fax)
5074 Bristol Industrial Way • Suite A • Buford, Georgia 30518
www.dpengr.com

# TECHNICAL SPECIFICATIONS

NAME OF PROJECT: **NEWTOWN PARK LAKE DREDGING**

OWNER: **City of Johns Creek, Georgia**

Section Title — Section No.

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# NEWTOWN PARK LAKE DREDGING

## PROJECT DESCRIPTION

The Newtown Park Lake Dredging project consists of the removal of existing submerged sediment using the hydraulic dredging method. The sediment slurry will be removed from the lake and transported by pump and pipe conduit to a geotube/geobag for sediment containment and dewatering. It is anticipated approximately 700 cubic yards of sediment will be removed from the existing lake.

Site access is provided using the existing asphalt trail at Brumbelow Road. For reference using Google Earth or GPS equipment, please use 34.01789, -84.263774 as your approximate coordinates for the trail access point. Work hours are between 8:00 a.m. and 8:00 p.m. Monday thru Friday. There are some Saturday park events during the month of September that will preclude work during this time.

The selected CONTRACTOR shall obtain all permit approvals from the U.S. Army Corps of Engineers prior to beginning work. A Land Disturbance Permit from the City of Johns Creek has been issued per the approved "Lake Dredging Plans for Newtown Park", LDP 16-1458.

The City of Johns Creek reserves the right to add or delete quantities from this project to meet pre-determined goals.

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This Section describes the methods by which measurement will be made of the quantities for which payment will be made for the PROJECT.

B. The project is to be bid as one (1) contract.

1.02 MEASUREMENT OF WORK

A. WORK shall be measured by the ENGINEER or his representative, with assistance from the CONTRACTOR prior to preparation of a payment request by the CONTRACTOR.

B. Unit quantities that are measured in place shall be measured monthly. The CONTRACTOR shall give the ENGINEER a minimum of two days notice for making all required measurements.

C. Materials that must be measured as delivered shall be measured at the time of delivery by the ENGINEER or his representative; the CONTRACTOR shall provide sufficient advance notice so that such measurements can be made.

D. WORK completed shall be measured for completion against the schedule of values provided by the CONTRACTOR in accordance with the General Conditions. Related work necessary for a complete and operational job not specifically identified as a pay item shall be included in the unit price bid. No additional payments will be made for such activities.

1.03 PROGRESS PAYMENTS

A. Progress payments shall be based on the quantity of units installed.

B. All items of WORK not specifically listed in the Bid Schedule shall be considered incidental to the construction, and the cost of all such work and material shall be included in the prices bid for various items listed.

C. All items listed for measurement and payment shall include all machinery, plant, materials and labor, etc., to successfully and satisfactorily complete WORK specified.

D. Payment: The CONTRACTOR will receive payment only for the items listed in the Bid Schedule of his contract, and no separate payments will be made for the work under any section of the CONTRACT DOCUMENTS except as provided for in the Bid Form. Where measurements are required to be made by the ENGINEER, for the payment of a pay item, the failure of the CONTRACTOR to give the adequate notification or failure of the CONTRACTOR to give the ENGINEER assistance for the measurement shall result in the forfeiture of payment for the work or item which was not measured.

E. WORK to be paid for as a "Lump Sum" shall be measured for completion against the "Schedule of Values" provided by the CONTRACTOR. The "Schedule of Values" shall be submitted at the preconstruction conference and shall include quantities and prices of

items aggregating the total "Lump Sum" and will subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction.

1.04 REFERENCES

A. Manual for Erosion and Sediment Control in Georgia, Sixth Edition, 2014, by the Georgia Soil and Water Conservation Commission.

B. Standard Specifications, Construction of Transportation Systems, 2013 Edition - Department of Transportation, State of Georgia, will be used for items of work not covered by these specifications or not shown on the drawings.

PART 2 PRODUCTS

2.01 STORED MATERIALS

A. Partial payment shall be made for approved materials stored at the project site, provided invoices for said materials are furnished in accordance with payment request submittal.

PART 3 EXECUTION

3.1 EROSION CONTROL ITEMS

A. The basis of payment for each item shall be unit price to include all labor, equipment and materials necessary to provide temporary and permanent erosion control, including maintenance and removal, throughout this contract based on the CONTRACTOR's proposed staging of work. Erosion control items to be used shall be as specified in the "Manual for Erosion and Sediment Control in Georgia" with emphasis on Best Management Practices.

3.2 LAKE DREDGING AND DISPOSAL

A. Lake dredging will be paid for excavating, removing, pumping, etc. dredged material from the lake to the identified disposal area on-site. The use of geotubes or geobags is required at the location shown on the approved construction plans. Routing of slurry pipeline shall be as shown on the approved construction plans. No routing of pipeline on existing trails will be allowed. This item will be paid by the cubic yard of material removed.

B. Determination of material removed will be by pre and post topographic survey provided by the OWNER unless alternates are agreed by the CONTRACTOR and OWNER prior to beginning the work. Pre-dredge topographic survey is included in the approved construction plans.

C. The CONTRACTOR is required to obtain all U.S. Army Corps of Engineers (CORPS) approvals prior to beginning work. Copy of approval must be provided to OWNER.

D. Time is of the essence. The project shall be completed at the earliest possible date per the contract documents.

3.3 GEOTUBES OR GEOBAGS

A. The basis of payment shall be Lump Sum to include all labor, equipment and materials necessary to provide geotubes or geobags for dewatering. Geotubes or geobags to be used

shall be as recommended by the manufacturer and manufactured by TenCate or approved equal.

3.4 SITE CLEAN-UP AND FINAL STABILIZATION

A. Ingress and egress into the construction site shall utilize the existing paved (asphalt) trail from Brumbelow Road The contractor shall minimize disturbance to surrounding areas to only that necessary to complete the work. Any damage to existing park property not recognized by the OWNER prior to beginning construction shall be repaired to the satisfaction of the OWNER at the CONTRACTOR's expense.

B. The CONTRACTOR **is not** responsible for providing final grassing for the project. Final grassing will be provided by the OWNER.

C. The CONTRACTOR **is not** responsible for removal of geotube/geobag and disposal of sediment. This will be performed by the OWNER.

D. Encroachment or crossing of the existing State Waters Buffer around the lake shall be approved by the City of Johns Creek. In general, the crossing shall be as close to perpendicular as possible with no land disturbance within the buffer area. This may require the use of mats to cross the buffer during construction and removal once construction is complete.

E. There **will not** be a Stream Buffer Variance obtained from the OWNER for this work; therefore, strict adherance to City of Johns Creek requirements will be required.

F. Clean up work areas by removing any scraps, rubbish or surplus material and dispose of them properly off the project site.

G. Wash and hose down paved surfaces to remove all mud, debris, and other extraneous material, just prior to final review. When cleaning, maintain compliance with all permits, including Erosion, Sediment and Pollution Control and Best Management Practices.

H. Payment for items required under this section and not included in the Bid Form shall be considered incidental to the construction, and the cost of all such work and material shall be included in the prices bid for various items listed.

I. Project will be complete upon final acceptance by the OWNER.

END OF SECTION

# Check Dam (Cd)

## DEFINITION

A temporary grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow.

## PURPOSE

To minimize the erosion rate by reducing the velocity of the storm water in areas of concentrated flow.

## CONDITIONS

This practice is applicable for use in small open channels and is not to be used in a live stream. Specific applications include:

1. Temporary or permanent swales or ditches in need of protection during establishment of grass linings.

2. Temporary or permanent swales or ditches which, due to their short length of service or other reasons, cannot receive a permanent non-erodible lining for an extended period of time.

3. Other locations where small localized erosion and resulting sedimentation prob lems exist.

## PERFORMANCE EVALUATION

For a product or practice to be approved for use in a check dam application, that product or practice must have a documented performance efficiency in channels with a flow rate of 2.0 cfs, as specified by GSWCC. For complete test procedures and approved products list please visit www.gaswcc.georgia.gov.

## DESIGN CRITERIA

Check dams should be designed using 2.0 cfs. For any flows exceeding 2.0 cfs, check dams may be used in conjunction with other BMPs in the channel. Dam height should be 24 inches maximum measured to the center of the check dam.

### Spacing

Two or more check dams in a series shall be used for drainage areas greater than one (1) acre. Maximum spacing between dams should be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam. (See Figure 6-12.1)

### Geotextiles

A geotextile should be used as a separator between the graded stone and the soil base and abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be selected/ specified in accordance with AASHTO M288-96 Section 7.3, *Separation Requirements*, Table 3. Geotextiles shall be "set" into the subgrade soils. The geotextile shall be placed immediately adjacent to the subgrade without any voids and extend five feet beyond the downstream toe of the dam to prevent scour.

## CONSTRUCTION SPECIFICATIONS

### Stone Check Dams (Cd-S)

Stone check dams should be constructed of graded size 2-10 inch stone. Mechanical or hand placement shall be required to insure compete coverage of the entire width of the ditch or swale and that the center of the dam is lower than the edges. **The center of the check dam must be at least 9 inches lower than the outer edges.** (See Figure 6-12.2)

### Straw-bale Check Dams (Cd-Hb)

Staked and embedded straw-bales may be used as temporary check dams in concentrated flow areas while vegetation is becoming established. Straw-bales should be installed per Figure 6-10.3.

**Installation**

Bales should be bound with wire or nylon string. Twine bound bales are less durable. The bales should be placed in rows with bale ends tightly abutting the adjacent bales.

**Downstream Row** (Refer to Figure 6-12.3):

Dig a trench across the small channel, wide enough and deep enough so that the top of the row of bales placed on their long, wide side is level with the ground. The tops of bales across the center of the channel should all be level and set at the same elevation. Place the bales in position and stake them according to the instructions below.

**Upstream Row**:

Dig another trench across the small channel, upstream and immediately adjacent to the first row of bales. The trench should be wide enough to accommodate a row of bales set vertically on their long edge. The trench should be deep enough so that at least 6 inches of each bale is below ground starting with the bale in the channel bottom. The trench should be as level as possible so that the tops of the bales across the center of the channel are level and water can flow evenly across them. Continue this trench up the side slopes of the small channel to a point where the unburied bottom line of the highest bale (Point "C", Figure 6-12.3) is higher than the top of the bales that are in the center of the channel (Point "D", Figure 6-12.3).

**Anchorage:**

Drive 2 x 2 stakes or #4 rebar through the bales and into the ground 1 1/2 to 2 feet for anchorage. The first stake in each bale should be driven toward a previously laid bale to force the bales together (See Figure 6-12.3).

Reference: Colorado NRCS Straw Bale Check Dam

## Compost Filter Sock (Cd-Fs)

The filter sock should be staked in the center. If the compost filter sock is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation.

Compost filter media used for compost filter sock filler material shall be weed free and derived from a well-decomposed source of organic matter.

The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted.

Test methods for the items below should follow US Composting Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. PH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost".

B. Particle size – 99% passing a 2 inch (50 mm) sieve and a maximum of 40% passing a 3/8 inch (-9.5 mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note- In the field, product commonly is between ½ and 2 inch (12.5 and 50 mm) particle size).

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material with 1/8 to 3/8 inch (3.2 to 9.5 mm) openings.

**MAINTENANCE**

Periodic inspection and required maintenance must be provided. Sediment shall be removed when it reaches a depth of one-half the original dam height or before. If the area is to be mowed, check dams shall be removed once final stabilization has occurred. Otherwise check dams may remain in place permanently. After removal, the area beneath the dam shall be seeded and mulched immediately.

**TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN**

1.cfs in the channel/ditch that the check dam is being used in:_____

2. Above 2.0 cfs: Yes_____ No_____

3. If Yes, list BMP being used in conjunction with check dams:_____

# STONE CHECK DAM

## SPACING BETWEEN CHECK DAMS

A = THE TOE OF THE UPSTREAM CHECK DAM.
B = TOP OF THE DOWNSTREAM CHECK DAM.
L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.

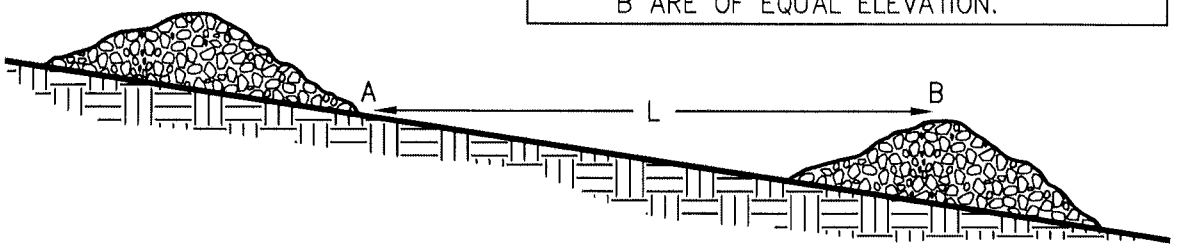
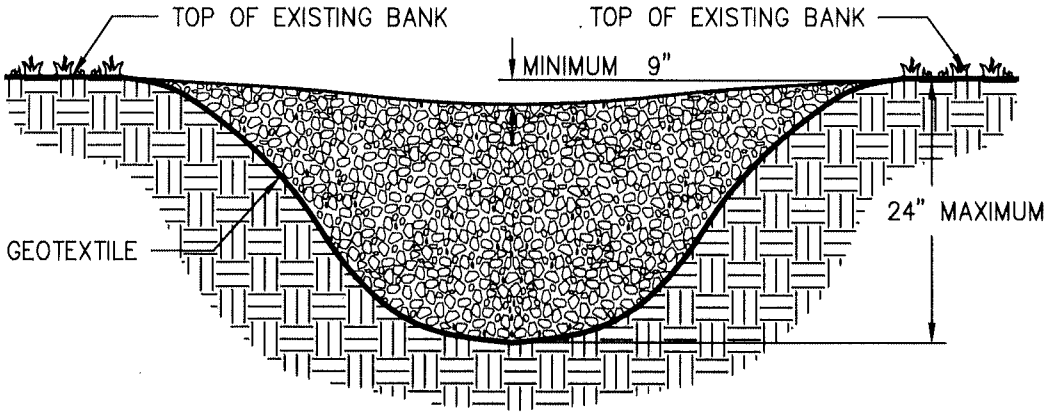


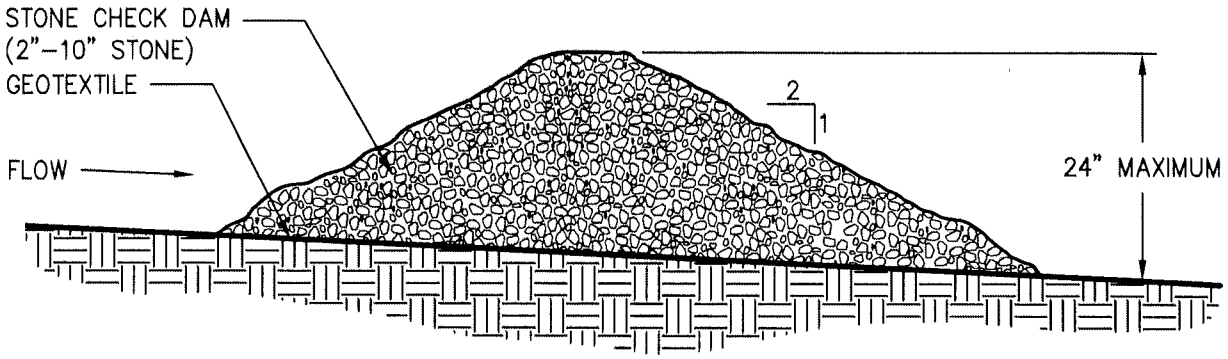

**Figure 6-12.1**

# STONE CHECK DAM

## CROSS SECTION




## PROFILE VIEW

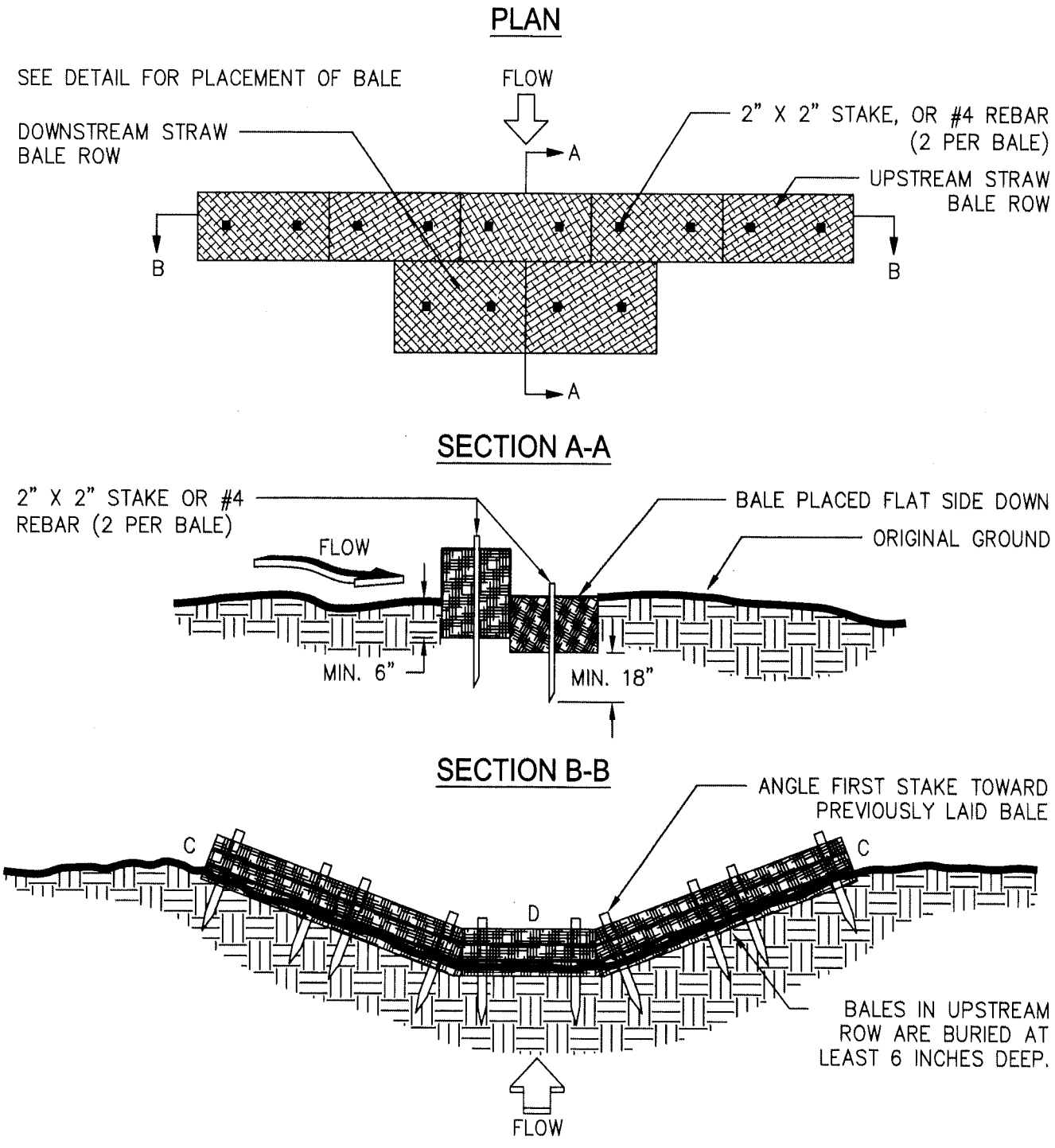



NOTES:

1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288–96, SECTION 7.3, TABLE 3).

**Figure 6-12.2**

# TYPICAL STRAW BALE CHECK DAM

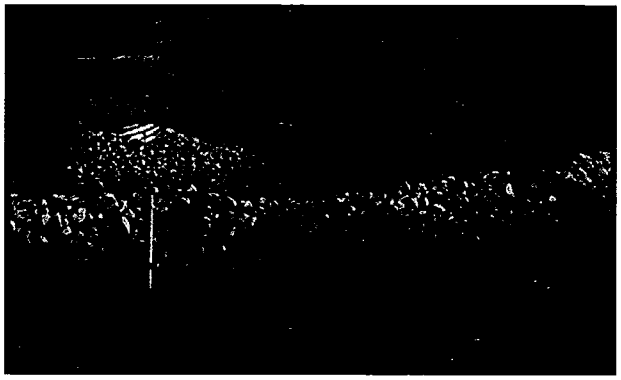



NOTES:

1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B–B SHOULD ALWAYS BE HIGHER THAN POINT D.

**Figure 6-12.3**

# Filter Ring (Fr)



## DEFINITION

A temporary stone barrier constructed at storm drain inlets and pond outlets.

## PURPOSE

This structure reduces flow velocities, preventing the failure of other sediment control devices. It also helps prevent sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed area.

## CONDITIONS

**Filter rings shall be used in conjunction with other sediment control measures**, except where other practices defined in this Manual are not appropriate (such as inlets to concrete flumes). They can be installed at or around devices such as inlet sediment traps, temporary downdrain inlets, and detention pond retrofits to provide additional sediment filtering capacity.

## DESIGN CRITERIA

Formal design is not required. The following standards shall be used:

### Location

The filter ring shall surround all sides of the structure receiving runoff from disturbed areas. It should be placed a minimum of four feet from the structure. The ring is not intended to substantially impound water, causing flooding or damage to adjacent areas.

The filter ring may also be placed below storm drains discharging into detention ponds, creating a centralized area, or "forebay", for sediment accumulation. This provides for easier, more localized clean-out of the pond. If utilized above a retrofit structure, it should be a minimum of 8 to 10 feet from the retrofit.

### Stone Size

When utilized at inlets with diameters less than 12 inches, the filter ring shall be constructed of stone no smaller than 3-5 inches (15 - 30 lbs.).

When utilized at pipes with diameters greater than 12 inches, the filter ring shall be constructed of stone no smaller than 10-15 inches (50 - 100 lbs.).

The larger stone can be faced with smaller filter stone on the upstream side for added sediment filtering capabilities. However, the smaller filter stone is more prone to clogging, requiring higher maintenance.

### Height

The filter ring shall be constructed at a height no less than two feet from grade.

## CONSTRUCTION SPECIFICATIONS

Mechanical or hand placement of stone shall be required to uniformly surround the structure to be supplemented. Refer to Appendix C for rock riprap specifications.

The filter ring may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill.

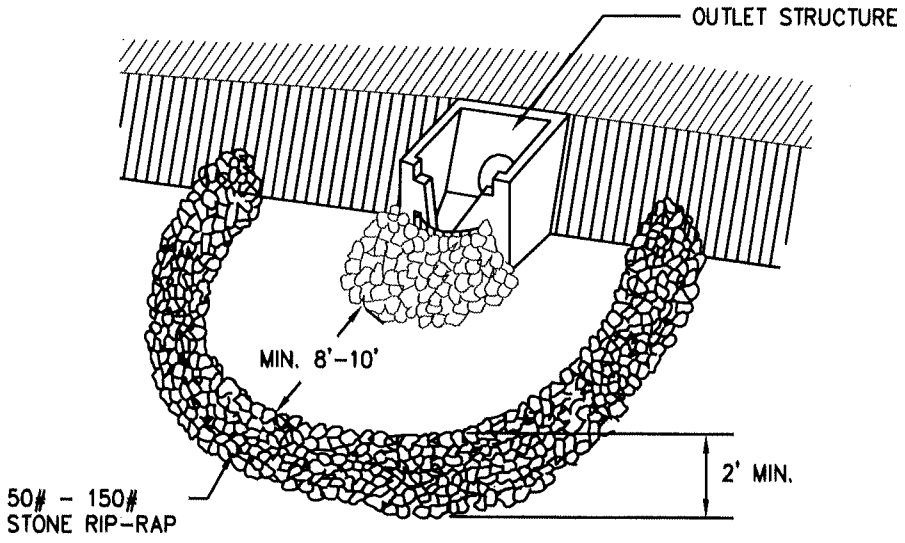
A common failure of filter rings is caused by their placement too close or too high above the structure it is enhancing. When utilized below a storm drain outlet, it shall be placed such that it does not create a condition causing water to back-up into the storm drain and inhibit the function of the storm drain system.

## MAINTENANCE

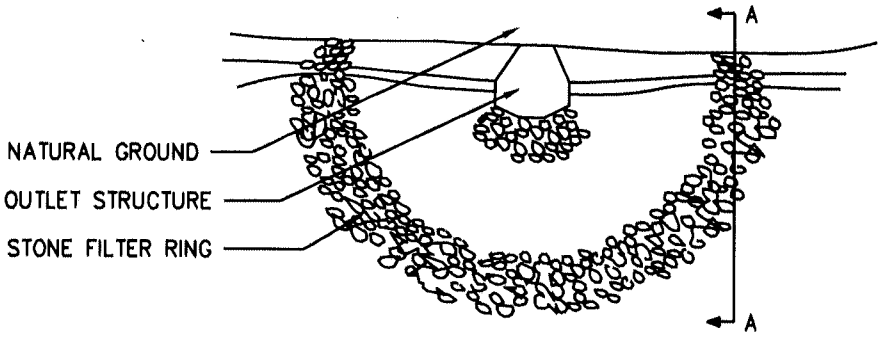
The filter ring must be kept clear of trash and debris. This will require continuous monitoring and maintenance, which includes sediment removal when one-half full. Structures are temporary and should be removed when the land-disturbing project has been stabilized.

# STONE FILTER RING

## PERSPECTIVE VIEW




## PLAN VIEW (NOT TO SCALE)




## CROSS SECTION (NOT TO SCALE)

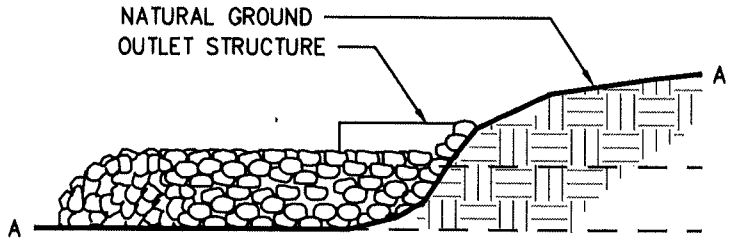
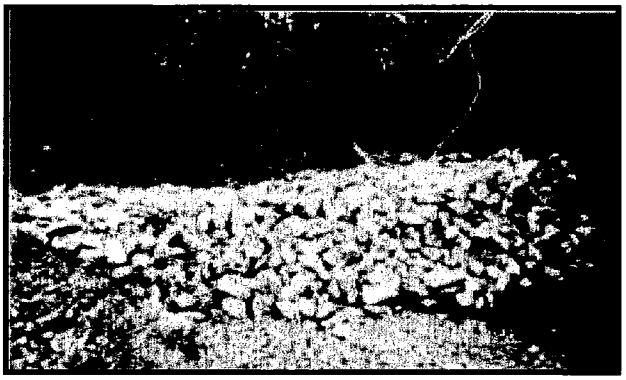



**Figure 6-20.1**

# Rock Filter Dam

Rd



## DEFINITION

A temporary stone filter dam installed across drainageways or in conjunction with a temporary sediment trap.

## PURPOSE

This structure is installed to serve as a sediment filtering device in drainageways or outlets for sediment traps (**See Temporary Sediment Trap - Sd4**). In some cases, it may also reduce the velocity of stormwater flow through a channel. This structure is not intended to substantially impound water.

## CONDITIONS

This practice is applicable for use in small channels which drain 50 acres or less. The rock filter dam must be used in conjunction with other appropriate sediment control measures to reduce the amount of sediment leaving the channel.

## DESIGN CRITERIA

The following standards shall be followed:

### Drainage Area

The drainage area to the dam shall not exceed 50 acres.

### Height

The dam should not be higher than the channel banks or exceed the elevation of the upstream property line. The center of the rock dam should be at least nine inches lower than the outer edges of the dam at the channel banks.

### Side Slopes

The side slopes shall be 2:1 or flatter.

### Location

The dam shall be located as close to the source of sediment as possible and so that it will not cause water to back up on upstream adjacent property or into state waters.

### Stone Size

The stone size shall be determined by the design criteria established in **Riprap - Appendix C.** The rock dam can be faced with smaller stone on the upstream side for additional filtering effect. However, this may make the dam more prone to clogging.

### Top Width

The width accross the top of the dam should be no less than six feet.

### Geotextile

Geotextiles should be used as a separator between the graded stone, the soil base, and the abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be specified in accordance with AASHTO M288-96 Section 7.5, *Permanent Erosion Control Recommendations.* The geotextile should be placed immediately adjacent to the subgrade without any voids and extend five feet beyond the downstream toe of the dam to prevent scour.

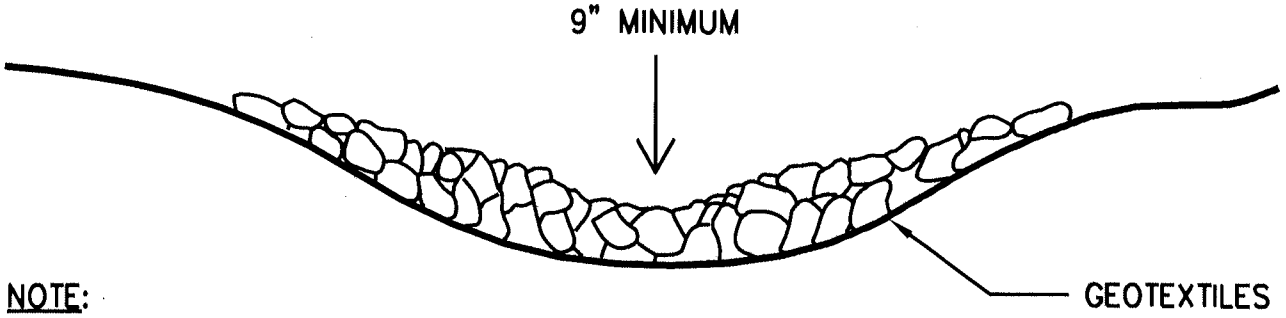
## CONSTRUCTION SPECIFICATIONS

Mechanical or hand placement will be required to insure that the rock dam extends completely across the channel and securely ties into both channel banks. The center of the dam must be no less than nine inches lower than the lowest side, to serve as a type of weir. Gabions can be installed to serve as rock filter dams, but should follow recommended sizing and installation specifications. Refer to specification **Ga - Gabion**. See Figure 6-24.1

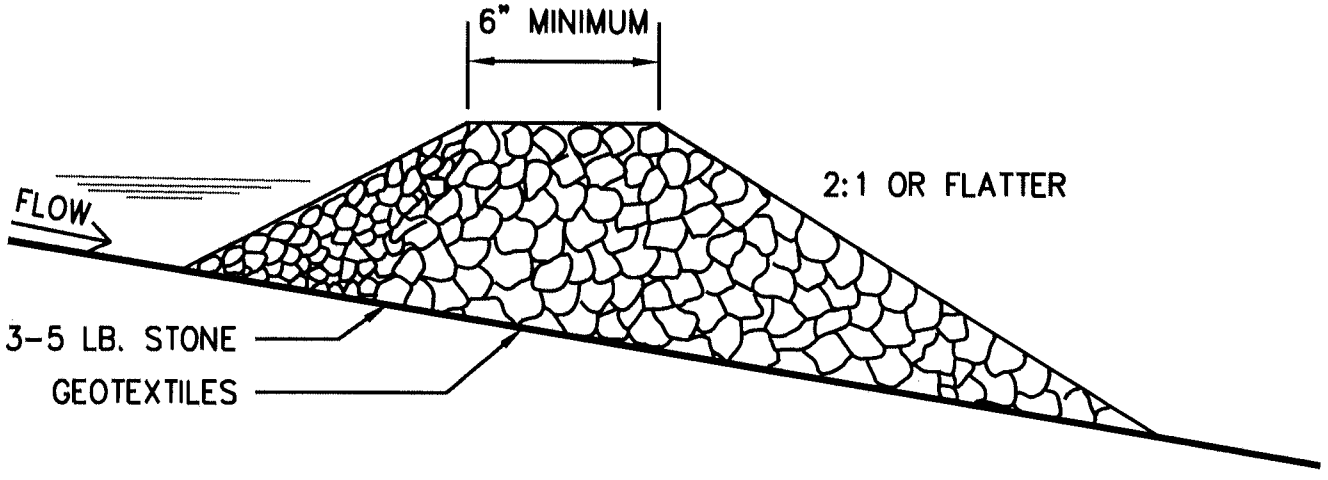
## MAINTENANCE

Rock dams should be removed once disturbed areas have been stabilized. Periodic inspection and required maintenance must be provided. Sediment shall be removed when it reaches a depth of one-half of the original height of the dam.

# ROCK FILTER DAM




NOTE:
ROCK FILTER DAM IS TO BE CLEANED
OUT WHEN VOLUME BECOMES HALF FULL.




NOTE:
ROCK SIZE DETERMINED ACCORDING TO
SPECIFICATIONS SET FORTH IN APPENDIX C.

**Figure 6-24.1**

# Sediment Barrier Sd1

## DEFINITION

Sediment Barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

## PURPOSE

To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

## CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

## PERFORMANCE EVALUATION

For a product or practice to be approved as a sediment barrier, that product or practice must have a documented P-factor no greater than 0.045 for non-sensitive areas or a P-factor no greater than 0.030 for sensitive areas, as specified by GSWCC. For complete test procedures and approved products list please visit www.gaswcc.georgia.gov.

## DESIGN CRITERIA

Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

All sediment barriers shall meet the required P-factor performance level. Supporting information on testing can be found at www.gaswcc.georgia.gov, under, Documents.

Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed ¼ acre for every 100 feet of sediment barrier.

**Table 6-27.1 Criteria for Sediment Barrier**

| Land Slope | Maximum Slope Length Above Fence |
|---|---|
| Percent | Feet |
| < 2 | 100 |
| 2 to 5 | 75 |
| 5 to 10 | 50 |
| 10 to 20 | 25 |
| >20* | 15 |

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of slope to the barrier should be provided.

### Placement

When using a sediment barrier the Design Professional must determine Type NS or Type S. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barri-

ers on a site in a single run the barriers must be overlapped 18 inches or as specified by design professional. See Figure 6-27.5

**CONSTRUCTION SPECIFICATIONS**

**Type NS Sediment Barrier** **Sd1-NS**

**Nonsensitive areas**
Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet. on center, with each driven into the ground a minimum of 18 inches. Type NS sediment barriers shall have a P-factor no greater than 0.045.

**Type S Sediment Barrier** **Sd1-S**

**Sensitive areas**
Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet on center, with each driven into the ground 18 inches. Type S sediment barriers shall have a P-factor no greater than 0.030.

**Filter Media Sock Specifications**
Compost filter media used for sediment barrier filler material shall be weed free and derived from a well-decomposed source of organic matter. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted. Test methods for the items below should follow US Composting Council Test Methods for theExamination of Composting and Compost guidelines for laboratory procedures:

A. PH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost"

B. Particle size – 99% passing a 2 inche (50mm) sieve and a maximum of 40% passing a 3/8 inche (9.5mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note- In the field, product commonly is between ½ in., [12.5mm] and 2 inches [50mm] particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material with 1/8 in. to 3/8 in., openings.

**Brush Barrier** **Sd1-BB**

(Only during timber clearing operations)

Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.

A brush barrier is a good tool to use in developing pasture in an agricultural situation to prevent sediment from leaving the site until the pasture is stabilized.

If greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-27.5.

**Installation**
Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, See Figures 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 6 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type S sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

**Static Slicing Method**

The static slicing machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into this slit behind the blade. The blade is designed to slightly disrupt soil upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

**Trenching Method**

Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2-"6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static slicing method. The static slicing method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

***Along all state waters and other sensitive areas, two rows of Type S sediment barriers shall be used. The two rows Type S should be placed a minimum of 36 inches apart.***

**MAINTENANCE**

**Sediment shall be removed once it has accumulated to one-half the original height of the barrier.** This is extremely important when selecting BMPs with a lower profile.

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

**TO BE SHOWN ON THE EROSION SEDIMENT AND POLLUTION CONTROL PLAN**

**When a SEDIMENT BARRIER is used, show the product height in inches for each barrier being used on site.**

# EXHIBIT B
## BID SCHEDULE

## NEWTOWN PARK LAKE DREDGING

## BID FORM

Unit Price Bid information is to be included for the items listed below. The quantities shown are estimates only and may not reflect actual quantities to be used for this project. The CONTRACTOR will be paid for the actual materials installed/removed. These items shall include all costs necessary to perform the work.

Please complete all Item Schedules.

| Item No. | Description | Unit | Est. No. of Units | Unit Price Bid Total |
|---|---|---|---|---|
| 100 | Relocation of Existing Fish to Shakerag Park, if necessary | LUMP | LS | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 200 | Silt Fence Type Non-Sensitive, Incl. Maint. & Removal (As Directed) | LF | 100 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 300 | Silt Fence Type Sensitive, Incl. Maint. & Removal (As Directed) | LF | 100 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 400 | Straw Bale Check Dam, Incl. Maint. & Removal | EA | 4 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 500 | Rock Filter Dam, Incl. Maint. & Removal | EA | 1 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 600 | Rip Rap Outlet Protection, Type 3 | SY | 12 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 700 | Plastic Filter Fabirc | SY | 12 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |

| Item No. | Description | Unit | Est. No. of Units | Unit Price Bid Total |
|---|---|---|---|---|
| 800 | Sediment Removal by Hydraulic Dredging, Incl. Pump, Pipe, etc. | CY | 700 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 900 | Geotube(s) for Sediment Dewatering | LUMP | LS | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 1000 | Stone Sediment Barrier at Geotube, Incl. Temporary Pipe | LUMP | LS | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 1100 | Stone Filter Ring at Lake Outlet Structure | EA | 1 | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |
| 1200 | Site Clean-Up and Final Stabilization | LUMP | LS | _____ _____<br>Dollars and Cents<br>_____<br>(Unit Price in Words) |

## BID SUMMARY

All construction shall conform to the CONTRACT DOCUMENTS. Owner reserves the right to use/not use the Bid listed below.

**TOTAL UNIT PRICE BID: NEWTOWN PARK LAKE DREDGING**

**$**_____

**(Price)**

**$**_____

**(Price in Words)**

**NOTE: Amounts shall be shown in words and figures; the amount written in words shall take precedence.**

END OF SECTION

# EXHIBIT C

IMMIGRATION AND SECURITY FORM
CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with the City of Johns Creek has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 989-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with the City of Johns Creek, contractor will secure from such subcontractors(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or substantially similar form. Contractor further agrees to main records of such compliance and provide a copy of each such verification to the City of Johns Creek at the time of the subcontractor(s) is retained to perform such service.

_____
EEV / Basic Pilot Program* User Identification Number

_____ _____
BY: Authorized Officer or Agent Date
(Contractor Name)

_____
Title of Authorized Officer or Agent of Contractor

_____
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON
THIS _____ DAY OF _____ 201___

_____
Notary Public
My Commission Expires:_____

*As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/ Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).
**(End of Form)**

# Affidavit Verifying Lawful Presence Within the United States

I, (print name) _____, swear or affirm under penalty of perjury that *(check one)*:

☐ I am a United States citizen or legal permanent resident 18 years of age or older; or

☐ I am a qualified alien or nonimmigrant under the Federal Immigration and Nationality Act 18 years of age or older lawfully present in the United States.

*Alien Registration Number:* _____

I am applying for the public benefit of contracting with the City of Johns Creek, Georgia to provide products or services.

I understand that this sworn statement is required by law because I have applied for a public benefit. I understand that state law requires me to provide proof that I am lawfully present in the United States prior to receipt of this public benefit. I further acknowledge that knowingly and willfully making a false, fictitious, or fraudulent statement of representation in this affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

_____ _____

Print Name of Applicant | Position Title (if applicable)

_____ _____

Signature of Applicant | Date

**Subscribed and sworn to before me on**

**this the _____ day of , 20____.**

_____

**(Clerk/Notary Public)**

**My commission expires:** _____